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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/700,342

11/03/2003

Bobby Jose

43273-506001US

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04/11/2012

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EXAMINER

HO, CHUONG T

ART UNIT

PAPER NUMBER

2476

MAIL DATE

DELIVERY MODE

04/11/2012

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

1. This office action is in response to the amendment filed 01/30/2012.

Response to Arguments

2. Applicant's arguments with respect to claims 9-26, 107-108, and 109-115 (Currently Amended claims 9, 107, 109) have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9-14, 16, 18-20, 109, 111, 114-115 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nevo et al. (Hereafter, Nevo '961) Pub. No.: US 2003/0214961 A1 in view of Lor et al. (Hereafter, Lor '071) Patent No.: US 7,779,071 A1.

Regarding claim 9, Nevo '961 teaches an access station (i.e., wireless device 100) [see Figure 1 and Abstract and Paragraphs 0009 & 0010 & 0011 & 0053 & 0054

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&0055] for wireless communications, the access station (i.e., wireless device 100) [see Figure 1] comprising:

signal transmission/reception coordination logic (i.e., coordinating transmitting and receiving operations) [see Fig. 1 and Abstract and Paragraphs 0010 & 0011] that is capable of ascertaining that an access point of the plurality of access points is receiving a signal and that is adapted to restrain at least one other access point of the plurality of access points from transmitting another signal responsive to the ascertaining that the access point is receiving the signal (i.e., ascertaining the transceiver 102a is receiving a signal and that is adapted to suspend transceiver 102b from signal transmission in order to avoid interference) [see Figure 1 and Paragraphs 0009 & 0010 & 0011 & 0053 & 0054 &0055].

However, Nevo '961 does not explicitly teach the access station comprising: a wireless input/output (I/O) unit that is configured to establish a plurality of access points.

Lor '071, in the same or similar fields of endeavor, teaches access point comprising: a wireless input/output (I/O) unit that is configured to establish a plurality of access terminals (i.e., the wireless device establishes the plurality of access points to follow monitoring usage by the wireless device of the at least two of the plurality of access points) [see Col. 2, Lines 29-35, Lines 55-57]; monitoring the plurality of access points for received signal (i.e., monitoring bandwidth usage of the at least two of the plurality of access points) [see Col. 2, Lines 29-35, Lines 55-57].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify wireless device 100 of Nevo '961 in view of Lor '071 because Lor '071 suggests that there is a need for a method or mechanism that can provide an enterprise WLAN architecture that provides for ease of installation and maintenance, seamless mobility of wireless devices in the enterprise and security for the enterprise [see Lor '071, Col. 1, Lines 45-50].

Regarding claim 10, Nevo '961 and Lor '071 teach the limitations of claim 9 above.

However, Nevo '961 does not explicitly teach wherein the plurality of access points established by the wireless I/O unit are co-located.

Lor '071, in the same or similar fields of endeavor, teaches wherein the plurality of access terminals established by the wireless I/O unit are co-located (i.e., the wireless device establishes the plurality of access points to follow monitoring usage by the wireless device of the at least two of the plurality of access points) [see Col. 2, Lines 29-35, Lines 55-57].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify wireless device 100 of Nevo '961 in view of Lor '071 because Lor '071 suggests that there is a need for a method or mechanism that can provide an enterprise WLAN architecture that provides for ease of installation and maintenance, seamless mobility of wireless devices in the enterprise and security for the enterprise [see Lor '071, Col. 1, Lines 45-50].

Regarding claim 11, Nevo '961 and Lor '071 teach the limitations of claim 9 above.

Nevo '961 further teaches wherein the wireless unit operates in accordance with at least on IEEE 802.11 standard (i.e., MAC frame of IEEE 802.11) [see Paragraph 0052 and Claim 8].

However, Nevo '961 does not explicitly teach the wireless I/O unit.

Lor '071, in the same or similar fields of endeavor, teaches access point comprising: a wireless input/output (I/O) unit that is configured to establish a plurality of access terminals (i.e., the wireless device establishes the plurality of access points to follow monitoring usage by the wireless device of the at least two of the plurality of access points) [see Col. 2, Lines 29-35, Lines 55-57].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify wireless device 100 of Nevo '961 in view of Lor '071 because Lor '071 suggests that there is a need for a method or mechanism that can provide an enterprise WLAN architecture that provides for ease of installation and maintenance, seamless mobility of wireless devices in the enterprise and security for the enterprise [see Lor '071, Col. 1, Lines 45-50].

Regarding claim 12, Nevo '961 and Lor '071 teach the limitations of claim 9 above.

However, Nevo '961 does not teach wherein the signal received by the access point comprises at least one up linked packet.

Lor '071, in the same or similar fields of endeavor, teaches wherein the signal received by the access point comprises at least one up linked packet [see Col. 2, Lines 29-35, Lines 55-57].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify wireless device 100 of Nevo '961 in view of Lor '071 because Lor '071 suggests that there is a need for a method or mechanism that can provide an enterprise WLAN architecture that provides for ease of installation and maintenance, seamless mobility of wireless devices in the enterprise and security for the enterprise [see Lor '071, Col. 1, Lines 45-50].

Regarding claim 13, Nevo '961 and Lor '071 teach the limitations of claim 9 above.

However, Nevo '961 does not explicitly teach wherein the signal received by the access point comprises at least a portion of an uplinked packet.

Lor '071, in the same or similar fields of endeavor, teaches wherein the signal received by the access point comprises at least a portion of an uplinked packet [see Col. 2, Lines 29-35, Lines 55-57].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify wireless device 100 of Nevo '961 in view of Lor '071 because Lor '071 suggests that there is a need for a method or mechanism that can provide an enterprise WLAN architecture that provides for ease of installation and maintenance,

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seamless mobility of wireless devices in the enterprise and security for the enterprise
[see Lor '071, Col. 1, Lines 45-50].

Regarding claim 14, Nevo '961 further teaches wherein the at least a portion of the uplinked packet comprises at least part of a preamble of the up linked packet (i.e., the MAC frame specified by IEEE801.11 is formed of a MAC header of the maximum of 30 bytes) [see Paragraph 0052].

Regarding claim 16, Nevo '961 further teaches wherein the signal transmission /reception coordination logic is further adapted to restrain the at least one other access point of the plurality of access points from transmitting a downlink signal responsive to the ascertaining that the access point of the plurality of access points is receiving the signal (i.e., coordinating the transmitting and receiving operations) [see Paragraphs 0010 & 0011].

Regarding claim 18, Nevo '961 further teaches wherein the signal transmission/reception coordination logic is further capable of monitoring the plurality of access points (i.e., coordinating the transmitting and receiving operations) [see Paragraphs 0010 & 0011].

Regarding claim 19, Nevo '961 further teaches wherein the signal transmission/reception coordination logic is capable of monitoring the plurality of access points to detect received signals (i.e., coordinating the transmitting and receiving operations) [see Paragraphs 0010 & 0011].

Regarding claim 20, Nevo '961 further teaches wherein the signal transmission/reception coordination logic is further adapted to restrain the at least one other access point of the plurality of access points while the access point is receiving the signal (i.e., coordinating the transmitting and receiving operations) [see Paragraphs 0010 & 0011].

Regarding claim 109, Nevo '961 teaches an access station for wireless communications. In a wireless system, the access station comprising: signal transmission/reception coordination logic (i.e., coordinating the transmitting and receiving operations) [see Paragraphs 0010 & 0011] that is capable of restraining transmission from the at least one access point (i.e., ascertaining the transceiver 102a is receiving a signal and that is adapted to suspend transceiver 102b from signal transmission in order to avoid interference) [see Figure 1 and Paragraphs 0009 & 0010 & 0011 & 0053 & 0054 & 0055] when another access point (i.e., ascertaining the transceiver 102a is receiving a signal and that is adapted to suspend transceiver 102b from signal transmission in order to

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avoid interference) [see Figure 1 and Paragraphs 0009 & 0010 & 0011 & 0053 & 0054 & 0055] is expecting a short- term response to a frame that was transmitted by the other access point (i.e., ascertaining the transceiver 102a is receiving a signal and that is adapted to suspend transceiver 102b from signal transmission in order to avoid interference) [see Figure 1 and Paragraphs 0009 & 0010 & 0011 & 0053 & 0054 & 0055].

However, Nevo '961 does not explicitly teach the access station comprising: a wireless input/output (I/O) unit that is configured to establish at least one access point.

Lor '071 , in the same or similar fields of endeavor, teaches access point comprising: a wireless input/output (I/O) unit that is configured to establish a plurality of access terminals (i.e., the wireless device establishes the plurality of access points to follow monitoring usage by the wireless device of the at least two of the plurality of access points) [see Col. 2, Lines 29-35, Lines 55-57]; monitoring the plurality of access points for received signal (i.e., monitoring bandwidth usage of the at least two of the plurality of access points) [see Col. 2, Lines 29-35, Lines 55-57].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify wireless device 100 of Nevo '961 in view of Lor '071 because Lor '071 suggests that there is a need for a method or mechanism that can provide an enterprise WLAN architecture that provides for ease of installation and maintenance, seamless mobility of wireless devices in the enterprise and security for the enterprise [see Lor '071, Col. 1, Lines 45-50].

Regarding claim 111, Nevo '961 and Lor '071 teach the limitations of claim 109 above.

However, Nevo '961 does not explicitly teach wherein the other access point is also established by the wireless I/O unit of the access station.

Lor '071, in the same or similar fields of endeavor, teaches wherein the other access point is also established by the wireless I/O unit of the access station (i.e., the wireless input/output interface 870) [see Col. 2, Lines 29-35, Lines 55-57].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify wireless device 100 of Nevo '961 in view of Lor '071 because Lor '071 suggests that there is a need for a method or mechanism that can provide an enterprise WLAN architecture that provides for ease of installation and maintenance, seamless mobility of wireless devices in the enterprise and security for the enterprise [see Lor '071, Col. 1, Lines 45-50].

Regarding claim 114, Nevo '961 further teaches wherein the at least one access point and the other access point are operating on different channels [see Figure 1 and Paragraphs 0009 & 0010 & 0011 & 0053 & 0054 & 0055].

Regarding claim 115, Nevo '961 further teaches wherein the different channels are adjacent [see Figure 1 and Paragraphs 0009 & 0010 & 0011 & 0053 & 0054 & 0055].

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5. Claims 21-26, 110, 112 -113 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nevo et al. (Hereafter, Nevo '961) Pub. No.: US 2003/0214961 A1 in view of Lor et al. (Hereafter, Lor '071) Patent No.: US 7,779,071 A1, and further in view of Adachi et al. (Hereafter, Adachi '167) Patent No.: US 6,983,167 B2.

Regarding claim 20, Nevo '961 and Lor '071 teach the limitations of claim 9 above.

However, Nevo '961 and Lor '071 do not explicitly teach wherein each access point of the plurality of access points corresponds to a communication beam of a plurality of communication beams that emanate from the access station.

Adachi '167, in the same or similar fields of endeavor, teaches wherein each access point of the plurality of access points corresponds to a communication beam of a plurality of communication beams that emanate from the access station (i.e., access point corresponds to a communication beam of a plurality of communication beams that emanate from wireless station 4-1, 4-2, 4-3) [see Col. 6, Lines 24-32, Lines 33-41].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify combined system (Nevo '961 -Lor '071) and further in view of Adachi '167 because Adachi '167 suggests that It is an object of the present invention to provide a wireless communication system and wireless station by which communication between an access point and plural stations can be efficiently performed even when SDMA is used with CSMA [see Adachi '167, Col. 2, Lines 6-11].

Regarding claim 22, Nevo '961 and Lor '071 teach the limitations of claim 9 above.

However, Nevo '961 and Lor '071 do not explicitly teach wherein each access point of the plurality of access points is associated with a medium access controller/baseband unit pair.

Adachi '167, in the same or similar fields of endeavor, teaches wherein each access point of the plurality of access points is associated with a medium access controller/baseband unit pair [see Col. 6, Lines 24-32, Lines 33-41].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify combined system (Nevo '961 -Lor '071) and further in view of Adachi '167 because Adachi '167 suggests that It is an object of the present invention to provide a wireless communication system and wireless station by which communication between an access point and plural stations can be efficiently performed even when SDMA is used with CSMA [see Adachi '167, Col. 2, Lines 6-11].

Regarding claim 23, Nevo '961 and Lor '071 teach the limitations of claim 9 above.

However, Nevo '961 and Lor '071 do not explicitly teach wherein the signal transmission/reception coordination logic comprises medium access controller coordination logic.

Adachi '167, in the same or similar fields of endeavor, teaches wherein the signal transmission/reception coordination logic comprises medium access controller

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coordination logic (i.e., MAC) [see Fig. 5A, Fig. 5B, and Col. 7, Lines 52-67 and Col. 8, Lines 1-30].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify combined system (Nevo '961 -Lor '071) and further in view of Adachi '167 because Adachi '167 suggests that It is an object of the present invention to provide a wireless communication system and wireless station by which communication between an access point and plural stations can be efficiently performed even when SDMA is used with CSMA [see Adachi '167, Col. 2, Lines 6-11].

Regarding claim 24, Nevo '961 and Lor '071 teach the limitations of claim 9 above.

However, Nevo '961 and Lor '071 do not explicitly teach wherein the medium access controller coordination logic is physically distributed to link two or more access stations.

Adachi '167, in the same or similar fields of endeavor, teaches wherein the medium access controller coordination logic is physically distributed to link two or more access stations (i.e., MAC) [see Fig. 5A, Fig. 5B, and Col. 7, Lines 52-67 and Col. 8, Lines 1-30].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify combined system (Nevo '961 -Lor '071) and further in view of Adachi '167 because Adachi '167 suggests that It is an object of the present invention to provide a wireless communication system and wireless station by which communication

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between an access point and plural stations can be efficiently performed even when SDMA is used with CSMA [see Adachi '167, Col. 2, Lines 6-11].

Regarding claim 25, Nevo '961 and Lor '071 teach the limitations of claim 9 above.

However, Nevo '961 and Lor '071 do not explicitly teach wherein the signal transmission/reception coordination logic operates at a baseband level .

Adachi '167, in the same or similar fields of endeavor, teaches wherein the signal transmission/reception coordination logic operates at a baseband level (i.e., wireless frequency (RF), base band or intermediate frequency (IF)) [see Col. 5, Lines 56-67].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify combined system (Nevo '961 -Lor '071) and further in view of Adachi '167 because Adachi '167 suggests that It is an object of the present invention to provide a wireless communication system and wireless station by which communication between an access point and plural stations can be efficiently performed even when SDMA is used with CSMA [see Adachi '167, Col. 2, Lines 6-11].

Regarding claim 26, Nevo '961 and Lor '071 teach the limitations of claim 9 above.

However, Nevo '961 and Lor '071 do not explicitly teach wherein the signal transmission/reception coordination logic operates at a radio frequency (RF) level (i.e.,

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wireless frequency (RF), base band or intermediate frequency (IF)) [see Col. 5, Lines 56-67].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify combined system (Nevo '961 -Lor '071) and further in view of Adachi '167 because Adachi '167 suggests that It is an object of the present invention to provide a wireless communication system and wireless station by which communication between an access point and plural stations can be efficiently performed even when SDMA is used with CSMA [see Adachi '167, Col. 2, Lines 6-11].

Regarding claim 110, Nevo '961 and Lor '071 teach the limitations of claim 109 above.

However, Nevo '961 and Lor '071 do not explicitly teach wherein the short-term response to the frame comprises an immediate response to the frame.

Adachi '167, in the same or similar fields of endeavor, teaches wherein the short-term response to the frame comprises an immediate response to the frame (i.e., response frame) [see Col. 13, Lines 5-30].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify combined system (Nevo '961 -Lor '071) and further in view of Adachi '167 because Adachi '167 suggests that It is an object of the present invention to provide a wireless communication system and wireless station by which communication between an access point and plural stations can be efficiently performed even when SDMA is used with CSMA [see Adachi '167, Col. 2, Lines 6-11].

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Regarding claim 112, Nevo '961 and Lor '071 teach the limitations of claim 109 above.

However, Nevo '961 and Lor '071 do not teach wherein the other access point is established by a different access station.

Adachi '167, in the same or similar fields of endeavor, teaches wherein the other access point is established by a different access station [see Col. 5, Lines 56-67].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify combined system (Nevo '961 -Lor '071) and further in view of Adachi '167 because Adachi '167 suggests that It is an object of the present invention to provide a wireless communication system and wireless station by which communication between an access point and plural stations can be efficiently performed even when SDMA is used with CSMA [see Adachi '167, Col. 2, Lines 6-11].

Regarding claim 113, Nevo '961 and Lor '071 teach the limitations of claim 109 above.

However, Nevo '961 and Lor '071 do not teach wherein the at least one access point and the other access point are operating on a same channel.

Adachi '167, in the same or similar fields of endeavor, teaches wherein the at least one access point and the other access point are operating on a same channel [see Col. 5, Lines 56-67].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify combined system (Nevo '961 -Lor '071) and further in view of Adachi '167 because Adachi '167 suggests that It is an object of the present invention to provide a wireless communication system and wireless station by which communication

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between an access point and plural stations can be efficiently performed even when SDMA is used with CSMA [see Adachi '167, Col. 2, Lines 6-11].

Allowable Subject Matter

6. Claims 107, 108, 116 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter:

Claim 107 is allowed over the prior art or record since the cited reference taken individually or in combination fails to particular disclose the following limitations: “a second access point of the plurality of access points is receiving a second signal that is ongoing on a second channel, the signal transmission/reception coordination logic adapted to restrain at least a third access point of the plurality of access points from transmitting a third signal on a third channel responsive to the ascertaining that the first access point is receiving the first signal and that the second access point is receiving the second signal that is on the second channel, wherein the restraining at least the third access point prevents degradation to the first and second signals ” and in combination with other limitations recited as specified in claim 107.

8. Claims 15, 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUONG T. HO whose telephone number is (571)272-3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sheikh Ayaz can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CHUONG T HO/

Examiner, Art Unit 2476